U.S. Environmental
Protection Agency, Region 5

SITE SAFETY AND HEALTH PLAN

Revision 1

Tower Standard LUST Site
Lac du Flambeau Indian Reservation
Lac du Flambeau, Wisconsin

EPA Contract No. EP-W-12-009
Task Order 2012

March 2016

Prepared for:

U.S. Environmental Protection Agency, Region 5
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ACRONYMS AND ABBREVIATIONS

Bristol	Bristol Environmental Remediation Services, LLC
CFR	Code of Federal Regulations
EPA	U.S. Environmental Protection Agency
HAZWOPER	Hazardous Waste Operations and Emergency Response
LEL	lower explosive limit
OSHA	Occupational Safety & Health Administration
PM	Project Manager
PPE	personal protective equipment
SDS	Safety Data Sheets
SME	Subject Matter Expert
SSHO	Site Safety and Health Officer
SSHP	Site Safety and Health Plan
TO	Task Order

1.0 INTRODUCTION

This Site Safety and Health Plan (SSHP) was prepared by Bristol Environmental Remediation Services, LLC (Bristol), and will serve as a guide to health and safety procedures during the sampling activities at the Tower Standard LUST site, located on the Lac du Flambeau Indian Reservation in Lac du Flambeau, Wisconsin. This SSHP is based on the requirements of Title 29 Code of Federal Regulations, Part 1910.120 (29 CFR 1910.120) and 29 CFR 1926.65.

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2.0 GENERAL ACTIVITIES

Approximately fifteen soil borings will be advanced up to 30 feet deep at the Tower Standard Site and adjacent to Haskell Lake. Four existing monitoring wells will be sampled, and ten ambient air samples will be collected. One sub-slab vapor probe will be installed and a sub-slab soil vapor sample will be collected.

2.1 HEALTH AND SAFETY PERSONNEL

The key safety personnel under this plan are the Program Manager and the Site Safety and Health Officer (SSHO). Position descriptions are explained below.

2.1.1 Program Manager

The Program Manager is Scott Ruth, who is responsible for the overall activities associated with this contract. He is responsible for the safety of the workers and the environment, and may assign some or all safety responsibilities to the SSHO.

2.1.2 Site Health and Safety Officer

The SSHO is to be determined. The SSHO is responsible for reviewing safety concerns with the Project Manager (PM). The SSHO will conduct safety briefings, audit workplace safety performance, and address worker health and safety concerns.

2.1.3 Site Workers

All site workers, including subcontractors, are responsible for following safety and health rules and regulations, following respective company policies, and adhering to the SSHP. Site workers will be instructed to immediately report unsafe conditions, accidents, exposures, and injuries to the SSHO. A morning safety briefing will be held and each site worker will sign a Daily Safety Meeting Sheet (Appendix A).

Site-specific hazard communication training will be held at the start of the project. Site workers are responsible for reading, understanding, and signing the Field Team Review section of the SSHP.

3.0 HAZARD ASSESSMENT

3.1 GENERAL INFORMATION

Potential hazards inherent to site activities are identified for developing and describing strategies for job safety. This section describes the types of hazards that may be encountered, and the controls that will be used to control or eliminate those hazards.

3.2 CHEMICAL HAZARDS

The chemicals of concern on this project are petroleum constituents such as volatile organic compounds (VOCs), and metals such as lead. The groundwater and soil samples will be collected and treated with preservatives including methanol, nitric acid, hydrochloric acid, and sodium bisulfate.

The designated sampler will wear modified Level D personal protective equipment (PPE) that will include at a minimum, field work clothes, eye protection, and nitrile gloves.

3.3 PHYSICAL HAZARDS

The potential physical hazards associated with this project include: unstable footing conditions, and heat or cold stress.

3.3.1 Unstable Footing Conditions

Workers are anticipated to encounter unstable footing conditions (slipping, tripping, or falling) during field activities. The potential hazards related to slipping, tripping, or falling associated with this site include:

- Uneven terrain, and
- Slippery soil and rocks.

Workers will not run at the site and will walk carefully on uneven surfaces. In the event that the ground surface is icy (especially in the morning), extra caution will be taken. If conditions are very icy, ice cleats will be worn on boots.

3.3.2 Movement of Drums and Containers

Drums and other containers will be on site for the purpose of containerizing soil cuttings and decontamination solutions.

The potential hazards related to these activities include overexertion during lifting and moving and pinching or mashing of fingers or toes during movement.

Workers will be instructed in proper lifting techniques to minimize risk of back injury or other strains/sprains. Heavy lifting will be performed on level ground, by two-man teams, or in some instances, special lifting/transport equipment (power tailgate, drum caddy, etc.) may be used.

3.3.3 Vehicle Traffic

Portions of the site investigation may occur immediately adjacent to community streets in Lac du Flambeau. Site control (Section 4.0) and proper PPE (Section 5.0) will be utilized to ensure that vehicles are aware of project personnel and use caution while driving in the vicinity. During the daily safety meeting, the SSHO will remind personnel to stay aware of vehicle traffic and use caution while in, or adjacent to, community streets.

3.3.4 Heavy Equipment

Heavy equipment that will be used for this project is anticipated to be limited to a Geoprobe drill rig operated by a subcontractor.

Operators of heavy equipment must follow the regulations specifically for the type of equipment they are operating. Operators and drivers will obey signs, postings, and instructions.

There is a potential for workers to be struck by these vehicles, or to be injured by contact with exposed mechanical parts. To control these hazards, regulated work areas will be established around each job site, and safe distances will be maintained between workers

and mechanical equipment. All personnel will wear proper PPE (including high visibility clothing, hard hats, eye protection, hearing protection, steel toe or safety toe boots, and leather gloves) while in proximity to heavy equipment in operation.

In general, Bristol personnel will not approach heavy equipment in operation. Personnel needing to approach heavy equipment while the equipment is operating will observe the following protocols:

- Make eye contact with the operator (and spotter),
- Signal the operator to cease heavy equipment activity, if applicable,
- Approach the equipment operator and inform the operator of their intentions.

Mobile equipment will have backup alarms and spotters will be used to direct equipment operators. Spotters will also be used when maneuvering heavy equipment near overhead obstacles and overhead power lines. Under no circumstances will heavy equipment booms travel closer than six feet to any overhead power line.

3.3.5 Cold and Wind Exposure

During cold or windy conditions, it is important to prevent heat loss; exposed limbs and the head are major areas of heat loss. The trunk and head should be warm enough to assure constant blood flow to keep extremities warm. Warming shelters will be established if necessary.

3.3.6 Heat Stress

Heat stress can occur outside of summer months. The SSHO will monitor site conditions for temperature and humidity on a daily basis, closely observing workers for symptoms of heat stress. Symptoms can include dizziness, confusion, headache, and rapid pulse. Workers will be encouraged to stay hydrated throughout the workday and take appropriate breaks. The SSHO will establish work and rest regimens as necessary, based

on daily conditions. Break areas will be established to provide shade from the sun, and cool water will be provided at all times.

3.3.7 Noise

All heavy equipment can produce hazardous noise levels in excess of 85 decibels. Power tools can also produce hazardous noise levels, especially when used indoors. Field operations will include use of a hammer drill indoors; this is identified as an activity that has particularly high potential for generating hazardous noise levels.

The SSHO will determine when potential noise exposure is hazardous and when protective measures should be taken. However, whenever power tools (such as a hammer drill) are in use, or heavy equipment is operating, site workers and equipment operators will use hearing protection. The primary hazard associated with noise exposure is hearing loss, which is easily preventable with proper precautions and use of PPE.

4.0 SITE CONTROL

4.1 WORK ZONES

Emergency exit routes from the work area will be determined upon arrival at each property.

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5.0 PERSONAL PROTECTIVE EQUIPMENT

Personal protective equipment will be provided when hazard control methods are determined to be impractical or inadequate to protect the worker. By providing for the proper selection, training, use, and maintenance of PPE, worker exposure to hazardous agents can be minimized. The site hazards specific to this project regarding PPE are those associated with:

- Petroleum products and petroleum vapors;
- Physical conditions related to the type of project; and
- Chemical hazards from sample preservatives.

5.1 LEVEL D PPE

All site work will initially be conducted in modified Level D PPE. Level D PPE for this project will include:

- Latex/neoprene/nitrile or leather gloves; and
- Cotton or chemical/fluid-resistant clothing.

If site conditions change or new information becomes available, the SSHO will modify PPE requirements to address the change in site conditions. If a PPE upgrade is required, workers will be responsible for inspecting their PPE for cracks, holes, and proper fit. If any abnormalities are found, the worker shall report the defect to the SSHO. Workers also need to be aware of the limitations of provided PPE. Table 1 lists PPE limitations known for the PPE selected:

Table 1 PPE Limitations

PPE Items	Limitations
Hard Hat	Hard hats should not be painted, nor have holes drilled into them. These are considered damaged, and damaged hard hats cannot protect properly.
Safety-Toe Footwear	If steel toe boots are chosen over composite materials, the steel-toe shield can cause cold feet in cool weather. Heavy wool socks are helpful.
Hearing Protection	Earplugs and muffs have to be inserted, or cover the ears as specified by manufacturer, or they will not protect to their maximum capability.
Gloves	Gloves wear out and/or get ripped and torn. Gloves also reduce finger dexterity. Daily inspections should be completed and gloves replaced if they are determined not to be in good condition. When working with machinery containing moving parts, gloves can get caught in rotating parts.
Protective Clothing (Coveralls)	Coveralls are not complete chemical barriers and will not prevent skin punctures or cuts. Coveralls also are subject to tearing and fluid absorption.

6.0 COMMUNICATIONS

A variety of communication systems will be used for onsite and offsite communication. These include telephones, cellular telephones, hand signals, and posting of information. Some residences/businesses near the work sites may have landline telephones that may be available for use during an emergency.

Before starting field operations, the Bristol PM will coordinate with the tribal point-of-contact to establish a reliable method of communication, if needed for emergency operations.

In case of a site emergency, workers are to remove themselves from danger, inform fellow workers, make a quick assessment of conditions, and contact the PM. The PM will contact emergency personnel required to handle the emergency condition.

6.1 HAND SIGNALS

Basic hand signals to be used on site are as follows:

Signal		Meaning
Hands On Throat	=	Out of Air/Can't Breathe
Thumb Up	=	I'm OK/ I Understand
Thumb Down	=	No/ Negative
Forward Crossed Wave	=	Problem/ Needs Help
Grip Wrist	=	Exit Immediately

6.2 POSTING EMERGENCY INFORMATION

Emergency phone numbers will be placed in the sampling team vehicle. The following information will be posted:

- Emergency telephone numbers for Fire Department, Emergency Medical Personnel, and Spill Response;
- Name and telephone number of the PM and SSHO; and
- Figure showing (and written) directions from the site to the nearest hospital (Appendix B).

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7.0 TRAINING AND RECORDKEEPING

7.1 GENERAL INFORMATION

All site workers shall be qualified to perform their designated duties, based on their experience, education, and training. Enforcement and continuous reinforcement will be implemented through daily safety meetings and one-on-one discussions.

7.2 INITIAL AND REFRESHER TRAINING

The OSHA Regulation 29 CFR 1910.120 describes training requirements for persons working at hazardous sites. This regulation clearly identifies the level of training to be provided. Documentation of such training will be available on site. All site workers are required to complete Hazardous Waste Operations and Emergency Response (HAZWOPER) training and refresher classes as required.

7.3 SUPERVISORS

Supervisors shall have an additional 8 hours of health and safety training commensurate with their duties per 29 CFR 1910.120(e)(4).

7.4 PROJECT-SPECIFIC TRAINING

Project-specific training will include:

- Cardiopulmonary resuscitation/first aid – at least one person on site; and
- 40-hour HAZWOPER or a current 8-hour refresher course.

7.5 HAZARD COMMUNICATION TRAINING

Safety Data Sheets (SDSs) will be available to workers on site for each hazardous agent they might encounter. Safety briefings will include a review and location of the SDS. Any known hazardous materials that might expose the worker will be discussed prior to beginning work. The SDS will be maintained on site.

As part of the site-specific training, the following topics will be addressed:

- The information in the SSHP;
- Communication of physical or chemical properties of any known hazards;
- Hazard communication for materials brought onto the site that were not covered at the time of start-up;
- Use, limitations, and proper fit of PPE;
- The proper donning and doffing of PPE;
- Emergency procedures, including spill prevention and response; and
- Bloodborne pathogens briefing.

7.6 TRAINING DOCUMENTATION

All applicable training documents and certifications will be maintained at the site and archived after project completion.

7.7 VISITORS

Visitors may visit the site because of its location. However, bystanders will be required to stay outside of all work zones and away from site equipment (see Section 4.0).

8.0 RECORDKEEPING AND REPORTING

Health and safety records are maintained at the Bristol corporate office to fulfill all OSHA, workers' compensation, and insurance recordkeeping requirements.

8.1 INJURY AND ILLNESS RECORDKEEPING AND REPORTING REQUIREMENTS

- OSHA No. 300 "Log and Summary of Occupational Injury and Illness": This log is maintained at the Bristol corporate office. Each recorded injury or illness is entered in the log within 6 days after notice that a recorded case has occurred (29 CFR 1904.2).
- Bristol Incident Report Form. A copy of this report must be provided to the Bristol corporate Safety Manager immediately.
- OSHA Fatality and Multiple Injury Notification: The nearest OSHA office must be contacted within 8 hours of being notified of an occupational fatality or multiple injuries (29 CFR 1904.8).

8.2 SITE SAFETY INSPECTIONS AND LOGS

Site safety inspections will be documented in the project log that will be maintained on site for the duration of the operation. This documentation will include safety inspections, work summaries, safety meetings, and incident investigations, etc. The operator's checklist for heavy equipment is provided in Appendix C.

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9.0 MEDICAL SURVEILLANCE

Bristol will comply fully with CFR 1910.120 (f)(6) and 1926.65 (f)(6) at all times.

9.1 MEDICAL PROGRAMS

The medical program administered by Bristol includes provisions and procedures for:

- Pre-employment/exit physicals as required,
- Ongoing medical surveillance,
- Hearing tests, and
- Vision tests.

The specific requirements for this project include all of the above. These tests will be completed before the worker begins working on site. It is noted that the occupational physician performing the physical examination is given a list of known hazards and contaminants on the site prior to fit-for-work examination and testing.

9.2 EMERGENCY MEDICAL SURVEILLANCE

Emergency medical surveillance must be provided within 72 hours of:

- A worker being exposed to hazardous material during an emergency,
- A worker exhibiting signs and symptoms of exposure, and
- A worker losing consciousness.
- Any worker who receives emergency medical surveillance will not be allowed to work at the site until a physician has issued a certificate of medical fitness.
- Emergency decontamination will be initiated by personnel on site as needed.

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10.0 RECORDKEEPING

Bristol's Human Resources Department will maintain medical records for each Bristol site worker in confidential files in their corporate office.

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11.0 EMERGENCY PROCEDURES

In case of a site emergency, immediate action will be taken to protect life, property, and the environment. The following paragraphs describe the response systems and the line of communication required. In the event of an incident or near miss event, manage the event in accordance with the flow chart included in Appendix D.

11.1 MEDICAL EMERGENCIES

First aid kits are available at the site to treat injured workers requiring medical attention. Consistent with the site-specific briefing on bloodborne pathogens, care will be taken to guard against blood or other bodily fluids being transferred to another worker. Gloves and other barriers will be used.

If the medical emergency is beyond the capability of the first aid providers, emergency medical services will be contacted by calling "911." All site workers will be briefed on the buddy system and the importance of calling for help and staying safe.

For urgent care, or if the emergency requires transportation of a worker to medical facilities by site personnel, specific directions and facility contacts will be included under Appendix B.

11.2 FIRE RESPONSE

To report a fire, call 911. Bristol employees and subcontractors are not required to obtain training in firefighting.

11.3 ENVIRONMENTAL EMERGENCIES

The PM will assess environmental emergencies, such as leaks or spills. If necessary, the PM will notify the EPA Subject Matter Expert (SME) and tribal contact. The SME and/or tribal contact will contact the appropriate agency or authorities, as necessary. Appropriate spill response kits will be maintained on site.

11.4 EMERGENCY INFORMATION

The following emergency information will be posted in the Bristol vehicle:

Organization/Personnel	Phone Number
Fire Department	911
Police Department	911
EPA SME – Bob Egan	(312) 886-6212 Office (708) 296-0102 Cell
Wayne McDaniel	(409) 658-2828 Cell
Program Manager – Scott Ruth	(907) 563-0013 Office (907) 250-4952 Cell

Notes:
EPA = U.S. Environmental Protection Agency
SME = Subject Matter Expert

11.5 SPILL PREVENTION PROGRAM

In the event that a spill is detected on site, steps and procedures listed below must be taken to protect the health and safety of nearby persons.

- Evacuate the area and contact the appropriate emergency response agency.
- The Response Team will initiate the emergency response plan.
- Swiftly transport any victims to the nearest medical facility for observation.

11.6 RELEASE REPORTING AND NOTIFICATION

All spills will be immediately reported to the PM for purposes of completing reports, and for contacting the necessary agencies. Any Regulatory Agency contacts are to be made through the EPA SME and tribal contact.

11.7 EVALUATING EMERGENCY PREPAREDNESS

The PM will contact the EPA SME and tribal contact in case of any emergency, and will comply with all directions given. Debriefings after any incident will include summaries from participants with regard to changes needed and an overall critique of the plan. Changes, reviews, and updates made to the plan may result from actual field conditions, or from changing conditions.

11.8 ADVERSE WEATHER

In case of adverse weather, the SSHO will determine if work can continue without sacrificing the health and safety of field workers. Some of the items to be considered prior to determining if work should continue are:

- Extreme heat or cold and wind;
- Heavy precipitation;
- High winds;
- Limited visibility;
- Electrical storms; and
- Potential for accidents.

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12.0 FIELD TEAM REVIEW

Each Field Team member will sign this section after site-specific training is completed and before being permitted to work on site.

I have read and reviewed the Site Safety and Health Plan and understand the information presented. I will comply with the provisions contained therein.

Name	Date

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APPENDIX A

Daily Safety Meeting Sheet

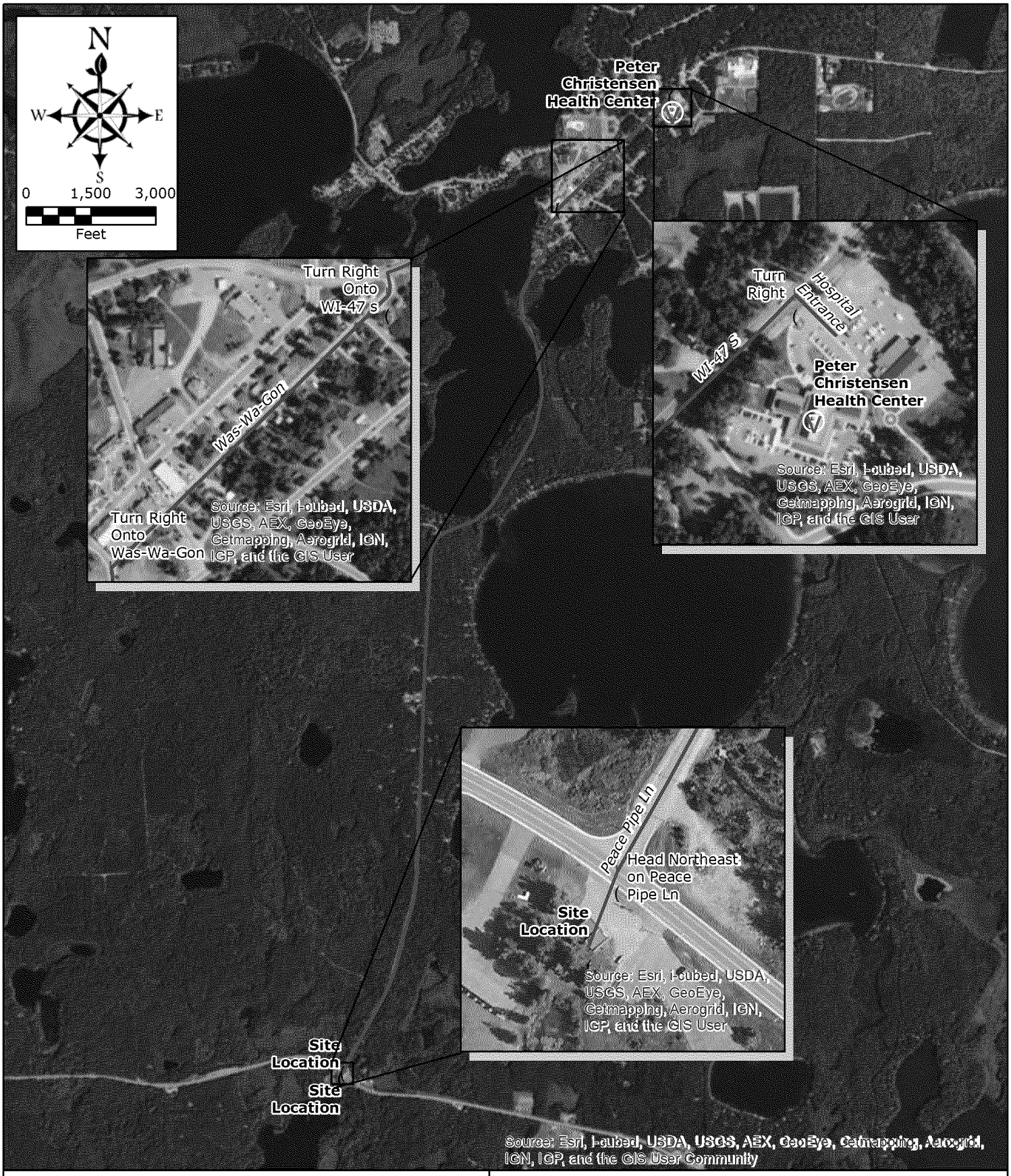
DAILY SAFETY MEETING SHEET

Each crew member must sign and date the following form to document attendance at the safety meeting.

Signature	Print Name	Date

APPENDIX B

Emergency Medical, Fire and Police
Contact Information, Emergency Route Map



Legend

- Hospital
- Direction
- SiteLocation
- Route

FIGURE 1
LAC DU FLAMBEAU, WI
EPA TASK ORDER 2012 TOWER STANDARD LUST SITE
HOSPITAL ROUTE MAP

Bristol
ENVIRONMENTAL REMEDIATION SERVICES, LLC.
Phone (907)563-0013 Fax (907)563-6713

DATUM:	DATE 05/29/2015	SHEET 1
NAD83 PROJECTION:	DWN. NAP	of
SP WI ZN FT Project No.	SCALE 1" = 3000'	1
34160024	APPRVD. JSD	

Document Path: G:\Jobs\34160024_EPA_2012_Tower\SSHP\Maps\Figure1.mxd

APPENDIX C

Equipment Operator's Checklist

Bristol
ENVIRONMENTAL
REMEDIATION SERVICES, LLC

Equipment Operator's Checklist

Company: _____ **Operator:** _____ **Date:** _____

Equipment Type: _____ **Model:** _____

Equipment Items	Good Condition	Needs Attention	Notes:
Steering Brakes			
Wheels, Tires, Tracks			
Horn, Back-up Alarm			
Seatbelt, Safety device			
Roll over Protection			
Fire Extinguisher			
Equip. Maintenance			
Any Other Deficiency			

Site Work Inspection

Site Work Inspection	None	Yes	Notes:
Material Obstructions			
Slip, Trip, & Fall Def.			
Ruts, Holes, Hazards			
Barricades / Perimeter			
Trenches/Excavations			
Overhead Power lines			
Traffic Exposures			
Any Other Deficiency			

Safety Comments:

_____

_____

_____

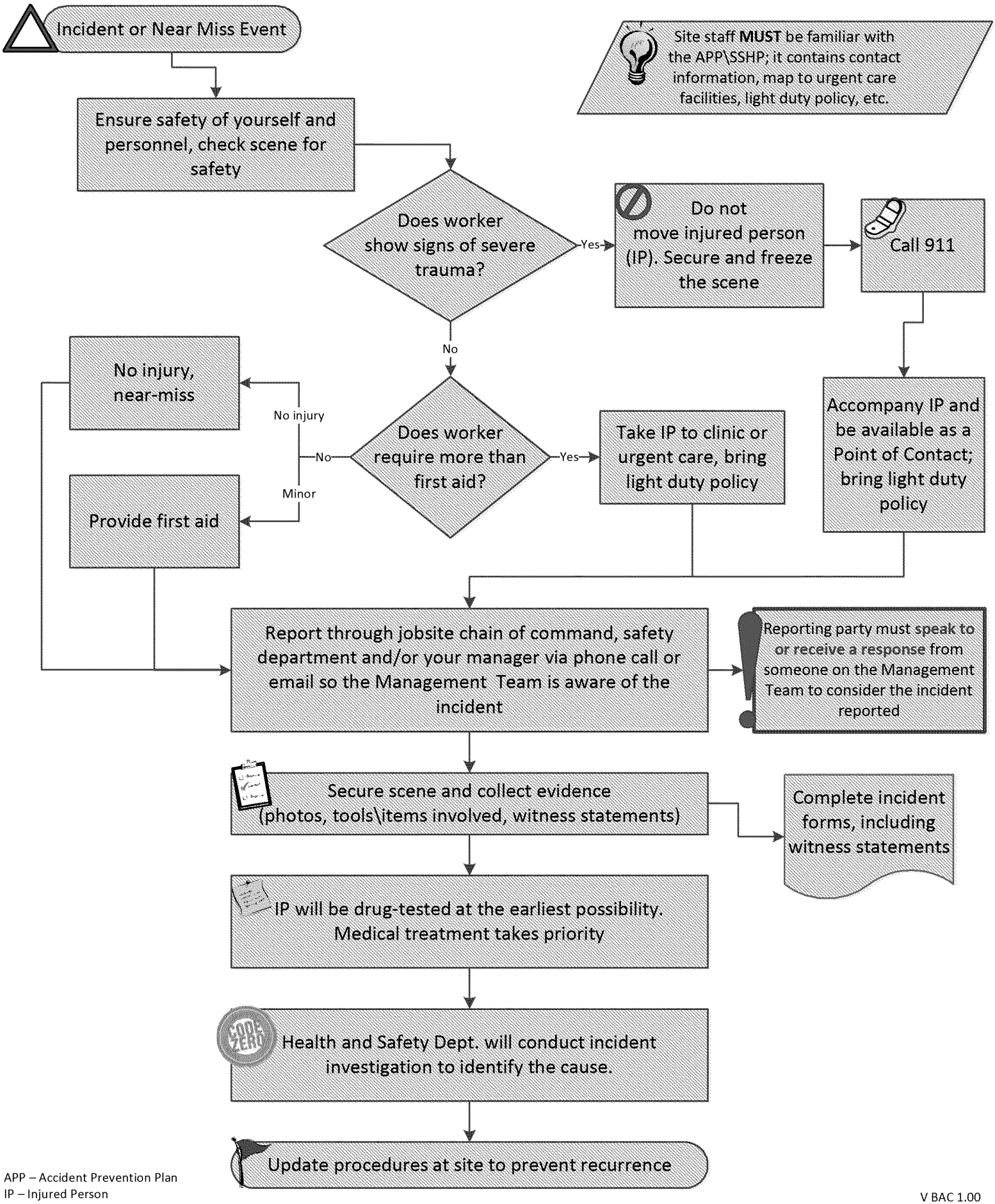
_____

Signature: _____ **Date:** _____

APPENDIX D

Flow Chart for Managing an
Incident or Near Miss Event

Managing an Incident or Near Miss Event



APP – Accident Prevention Plan
IP – Injured Person
SSHP – Site Safety & Health Plan

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